

ABSTRACT

A system, method and device for storing branch predictions in a queue that may be connected to a branch prediction unit, and for delivering the stored predictions to an instruction fetch unit. A look up may be made of for example two sequential lines, and for example a segmented cache of a branch prediction unit may generate predictions of an address having an even numbered index by referring to for example a first side of the cache, and an address with an odd numbered index by referring to for example a second side of the cache. Branch predictions for two sequential lines may be generated during for example a prediction period such as two clock cycles. In some embodiments, a next instruction pointer of a branch prediction unit may be independent or decoupled from of a next instruction pointer of an instruction fetch unit.